

Claims

1. A herbal health protective, promotive and nutraceutical formulation for women, human expectant mothers, wherein the said formulation comprising seeds/ seed products selected from the group consisting of legumes, cereals and pseudocereals ranging from 80-90% by wt; 10 – 20 % by wt of extract obtained from essential herbs/ medicinal plants of the genera *Centella*, *Chlorophytum*, *Boerhaavia* and *Sida*, and optional herbs / medicinal plants selected from the *Withania somnifera*, *Pueraria tuberosa*, *Asparagus racemosus* and *Saraca indica*.
2. A herbal nutraceutical formulation as claimed in claim 1 wherein, the seeds/ seed products are selected from dried seeds, roasted seeds and powdered seeds.
3. A herbal formulation as claimed in claim 1 wherein, the legumes used are essentially selected from the group comprising *Glycine max*, *Cicer arietinum*, *Phaseolus mungo*, *Phaseolus vulgaris* and *Phaseolus radiatus*.
4. A herbal formulation as claimed in claim 1 wherein, the legumes used are optionally selected from the group comprising *Psophocarpus tetragonolobus* and *Mucuna pruriens*.
5. A herbal formulation as claimed in claim 1 wherein, the total amount of legumes used is in the range from 55 - 60 % by wt.
6. A herbal formulation as claimed in claim 1 wherein, the cereals used are selected from *Triticum aestivum*, *Hordeum vulgare* or mixtures thereof.
7. A herbal formulation as claimed in claim 1 wherein, the pseudocereals used are selected from *Amaranthus hypochondriacus*, *Fagopyrum esculantus*, *Chenopodium quinoa* or mixtures thereof.
8. A herbal formulation as claimed in claim 1 wherein, the total amount of cereals used is in the range from 15-25 % by wt.
9. A herbal formulation as claimed in claim 1 wherein, the total amount of pseudocereal

used is in the range from 20 - 30 % by wt.

10. A herbal formulation as claimed in claim 1 wherein, the said herbs/medicinal plant parts used is selected from roots, fruits, bark and whole plants.

11. A herbal formulation as claimed in claim 1 wherein, the total amount of herbs/medicinal plants used is X, wherein X is ranging between 10 – 20 % by wt of the formulation.

12. A herbal formulation as claimed in claim 11 wherein, the amounts of the essential herbs/medicinal plants namely *Centella asiatica*, *Chlorophytum tuberosum*, *Boerhaavia diffusa* and *Sida cordifolia* are used in the ranges between 10-40 % by wt of X, 2-20% by wt of X, 5-30 % by wt of X and 10-20 % by wt of X respectively.

13. A herbal formulation as claimed in claim 12 wherein, the amounts of the essential herbs/medicinal plants namely *Centella asiatica*, *Chlorophytum tuberosum*, *Boerhaavia diffusa* and *Sida cordifolia* are used in the ranges between 16-32 % by wt of X, 4-16% by wt of X , 5-24 % by wt of X and 12-16 % by wt of X respectively.

14. A herbal formulation as claimed in claim 11 wherein, the amount of the optional herbs/medicinal plants namely *Withania somnifera*, *Pueraria tuberosa*, *Asparagus racemosus* and *Saraca indica* are used in the ranges between 0-16 % by wt of X, 0-24 % by wt of X and 0-16 % by wt of X and 0-12 % by wt of X respectively.

15. A herbal formulation as claimed in claim 1 optionally contains acceptable amount of further additives selected from *Piper*, *Elettaria* and *Myristica*.

16. An herbal health protective, promotive and nutraceutical composition for women and expectant mothers, wherein the said formulation comprising a mixture of seed powder consisting of legumes, cereals and pseudocereals ranging from 44 to 52 %, herbs/medicinal plants extract ranging from 5 to 13 %, sugar/jaggery ranging form 20 to 35 %, milk powder ranging from 0 to 20%, *Piper longum* fruit powder ranging from 0.5 to 5.0%, *Myristica fragrans* fruit powder ranging from 0 to 5.0%, *Elettaria cardamomum* seed powder ranging from 0 to 4.0 % and coca powder ranging from 0 to 10 %.

17. A composition as claimed in claim 16 wherein, the amount of legumes present in the overall seed powder mixture is in the range between 23-31% by wt.

18. A composition as claimed in claim 16 wherein, the amounts of cereals present in the overall seed powder mixture is in the range between 7- 13% by wt.

19. A composition as claimed in claim 16 wherein, the amounts of psuedocereals present in the overall seed powder mixture is in the range between 10- 13% by wt.

20. A composition as claimed in claim 16 wherein, the composition is suitable for use in the form of powder, granules, biscuits, tablets, ingots, syrups or capsules for women/human expectant mothers.

21. A process for the preparation of herbal health protective, promotive nutraceutical compositions useful as food supplements to ameliorate the general health of women/human expectant mothers with optimum nutrients so as to ensure the optimal growth and development of the child both at pre-natal and post-natal stages, said process comprising:

a. selecting one or more seeds/seed products from the group consisting of legumes, cereals and pseudocerels wherein, the legumes consisting plants of genera *Glycine*, *Cicer*, *Phaseolus*, *Psophocarpus*, *Mucuna*, *P.vulgaris*, and *P.radiatus*, cereals consisting plants of genera *Triticum* and *Hordeum*, and, pseudocereals consisting plants of genera *Amaranthus* *Chenopodium* and *Fagopyrum*,

b. roasting the seeds/seed products for 2 to 15 minutes under microwave conditions having frequency 1500-2500 Mhz,

c. powdering the roasted seeds to a mesh size of 50 - 400 and mixing the same to obtain a base product,

d. obtaining extract of herbs/medicinal plants from one or more plants of genera *Centella*, *Withania*, *Pueraria*, *Asparagus*, *Chlorophytum*, *Boerhaavia*, *Sida* and *Saraca*, and drying the extract to obtain a residue,

e. mixing the plants extract residue with the base product obtained from step (c) to get the final nutraceutical products and optionally adding one or more additives

selected from sugar, jaggary, milk powder, *Piper longum*, *Myristica fragrans*,
Elettaria cardamomun and coca powder.

22. A process as claimed in claim 21 wherein, the seeds/ seed products are selected from dried seeds, roasted seeds and powdered seeds.
- 5 23. A process as claimed in claim 21 wherein, the roasted seeds are powdered separately to pass through sieves having mesh size ranging from 50 to 400
24. A process as claimed in claim 21 wherein, the roasted seed powders comprising legumes, cereals and pseudocereals are mixed in various proportions ranging between 80 – 90 %.
- 10 25. A process as claimed in claim 21 wherein, the total amount of herbs/medicinal plants used is ranging between 10 – 20 % by wt of the formulation.
26. A process as claimed in claim 21 wherein, the legumes used are essentially selected from the group comprising *Glycine max*, *Cicer arietinum*, *Phaseolus mungo*, *Phaseolus vulgaris* and *Phaseolus radiatus*.
- 5 27. A process as claimed in claim 21 wherein, the legumes used are optionally selected from the group comprising *Psophocarpus tetragonolobus* and *Mucuna pruriens*.
28. A process as claimed in claim 21 wherein, the cereals used are selected from *Triticum aestivum*, *Hordeum vulgare* or mixtures thereof.
29. A process as claimed in claim 21 wherein, the pseudocereals used are selected from *Amaranthus hypochondriacus*, *Fagopyrum esculantus*, *Chenopodium quinoa* or mixtures thereof.
- 20 30. A process as claimed in claim 21 wherein, the total amount of legumes used is in the range from 55 - 60 % by wt.
31. A process as claimed in claim 21 wherein, the total amount of cereals used is in the range from 15-25 % by wt.
- 25 32. A process as claimed in claim 21 wherein, the total amount of pseudocereal used is in the range from 20 - 30 % by wt.
33. A process as claimed in claim 21 wherein, the amount of roasted seed powder used is in the range between 44 to 52 % by weight.
- 30 34. A process as claimed in claim 21 wherein, the roasted seed powder comprising legumes

in the range 23 – 31 % by wt, cereals in the range 6-13 % by wt and pseudocereals in the range 9 to 13 % by wt.

35. A process as claimed in claim 21 wherein, the plant parts used are selected from roots, fruits, bark and whole plant of herbs/medicinal plants which is ranging up to 20% by wt for use in the nutraceutical products.

36. A process as claimed in claim 21 wherein, the herbs/medicinal plant parts are cut into small pieces ranging from 2 to 10 cm, dried under shade at a temperature ranging from 25 to 45° C and crushed to coarse powder having size ranging from 10 to 20 mesh before extraction.

37. A process as claimed in claim 21 wherein, the crushed and powdered herbs/medicinal plants are mixed up to 50% of the total mixture.

38. A process as claimed in claim 21 wherein, the powdered herbs/medicinal plants mixture is extracted with aqueous alcohol in the range of 10 to 90% v/v thrice for 12 to 48 hours, at a temperature ranging between 25 to 45° C.

39. A process as claimed in claim 9 wherein, the alcohol used is selected from methanol, ethanol, propanol and butanol.

40. A process as claimed in claim 21 wherein, the said solvent from the combined extracts is removed under reduced pressure ranging from 20 to 100 PSI at a temperature ranging from 35 to 65° C to obtain viscous residue which is called as plants extract.

41. A process as claimed in claim 11 wherein, the plants extract is suspended in water in the ratio ranging from 20 to 70% by stirring for 10 to 50 minutes.

42. A process as claimed in claim 41 wherein, the suspension of plants extract is mixed with roasted seed powder mixture in the ratio ranging up to 20%.

43. A process as claimed in claim 21 wherein, the mixture of plants extract and roasted seed powders are mixed thoroughly in a mixer grinder for a period ranging from 5 to 50 minutes.

44. A process as claimed in claim 21 wherein, the mixture is dried for a period ranging from 12 to 48 hours at a temperature ranging between 30 to 50° C.

45. A process as claimed in claim 21 wherein, the dried plants extract and seed powders mixture are again mixed thoroughly in a mixer grinder for a period ranging from 5 to 50

minutes and obtaining the powder which is used to prepare final nutraceuticals.

46. A process as claimed in claim 21 wherein, the amount of optional additives used namely sugar/jaggary or mixture thereof, milk powder, *Piper longum*, *Myristica fragrans*, *Elettaria cardamomun* and coca powder are in the ranges between 23–50 % by wt, 0-30 % by wt, 0.5 -5 % by wt, 0-5 % by wt, 0-8 % by wt and 1-15 % by wt respectively.

47. A process as claimed in claim 21 wherein, the dried, powdered, mixture of plants extract, roasted seed powders, sugar/jaggary, milk powder, coca powder, *Elettaria cardamomum* powder, *Piper longum* fruit powder and *Myristica fragrans* (Jaiphal) fruit powder mixture is mixed thoroughly in a mixer grinder for a period of ranging from 5 to 50 minutes to get the final nutraceuticals.

48. A process as claimed in claims 21 and 47 wherein, the end-product is suitable for use in the form of powder, granules, biscuits, tablets or capsules for women/human expectant mothers.